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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/732,954	12/11/2003	Alexander Sulakvelidze	1799USD2	9240
43896	7590	09/28/2006	EXAMINER	
ECOLAB INC. MAIL STOP ESC-F7, 655 LONE OAK DRIVE EAGAN, MN 55121			KINSEY, NICOLE	
			ART UNIT	PAPER NUMBER

1648

DATE MAILED: 09/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/732,954	<b>Applicant(s)</b> SULAKVELIDZE ET AL.	
	<b>Examiner</b> Nicole E. Kinsey, Ph.D.	<b>Art Unit</b> 1648	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 88-102 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 88-102 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/11/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

The disclosure is objected to because of the following informalities: The specification was amended (12/11/2003) to update the priority information for the instant application. This information should be updated again to include the patent number for application number 09/757,687. In addition, the application data sheet states the incorrect parent application number for the instant application.

Appropriate correction is required.

### ***Specification***

The use of the trademarks NISAPLIN, LYSOL, 409, WAGNER and SAS/STAT has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

### ***Claim Objections***

Claims 101 and 102 are objected to because of the following informalities: Both claims recite in step (c) "applying the bacteriophage" instead of "applying the composition." Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 88-90, 91, 93, 97, and 99-102 are rejected under 35 U.S.C. 102(b) as being anticipated by Jones et al. (EP 0 414 304 A2).

Jones et al., discloses a method for sanitizing a hard surface comprising providing a hard surface, providing a composition comprising at least one bacteriophage, applying the composition to the surface and significantly reducing the microbial count (see abstract and col. 6, lines 17-28).

Jones et al. further discloses that the bacteriophage can be used to clean a hard surface such as a toilet bowl. It is common knowledge that toilet bowls are located in hospitals (claim 90), residences (claim 91), and public areas such as public restrooms/bathrooms (claims 93 and 97).

The composition of Jones et al. comprises one or more phages, which are capable of lysing one or more bacteria such as E. coli. Phages that lyse only a specific type of bacterium and phage that lyse various types of bacteria can be used (col. 2, lines 41-55). The composition can further contain additional components such as a disinfectant, e.g., a bactericide (col. 4, lines 28-29), a solvent (col. 4, line 27), or a foaming agent such as a surfactant (col. 3, lines 21-31).

As the method steps of Jones et al. are the same as recited in applicant's claims, the method of Jones et al. would inherently reduce the microbial count on the hard surface by at least about 1 log.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 92, 94-96, and 98 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. (EP 0 414 304 A2) in view of Day et al. (GB 2 253 859) and Youderian et al. (WO 98/47521).

The teachings of Jones et al. are outlined above under 35 USC § 102.

Jones does not disclose that the hard surface is located in the places recited in claims 92 and 94-96 or that the phage composition is applied using any of the devices recited in claim 98. However, Day et al. discloses the use of bacteriophage compositions to treat or prevent infestation of microbes. The phage composition can be applied to hard surfaces such as floors and drains (page 1, last full paragraph). The phage can be applied to surfaces in relevant areas as a powder, spray or dust. Distribution of the phage composition as a fine spray is ideal because it does not settle too rapidly, and it will allow the phage to spread out and to reach areas that cannot normally be reached directly (paragraph bridging pages 2 and 3). Industrial sprayers or

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aerosols can be used to distribute the phage composition as a fine solution (page 3, first full paragraph). Youderian et al. discloses that phage solutions can be sprayed on surfaces of a meat processing plant, including an animal carcass and surfaces with which an animal carcass may come in contact (page 12, lines 4-10).

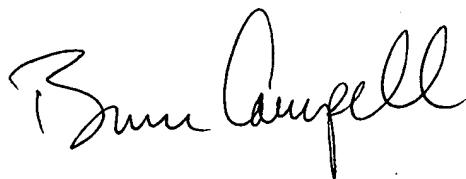
It would have been obvious to one of ordinary skill in the art to modify the methods taught by Jones et al. in order to distribute a phage composition to various hard surfaces other than a toilet bowl. One would have been motivated to do so, given the suggestions by Youderian et al. and Day et al. that phage compositions can be used to treat hard surfaces such as surfaces in a processing plant, floors and drains and that it is ideal to use an industrial sprayer or aerosols to distribute the phage as a fine spray so that it does not settle too rapidly and the phage can spread out and reach areas that cannot normally be reached directly. One of ordinary skill in the art would also know that hard surfaces, including floors and drains, are found on farms, slaughter areas, processing areas, in buildings, etc. There would have been a reasonable expectation of success, given the common knowledge that undesirable microbes exist on farm animals such as chickens, cows, pigs, etc., meat, places where animals and meats are processed, bathrooms, kitchens, and public areas and that bacteriophages kill these microbes. It is also common knowledge that microbes are easily transferred to surfaces via contact with an infected source, hence the availability of bleach or other antibacterial/antimicrobial products sold in stores for use in disinfecting kitchens, bathrooms, etc. Thus the invention as a whole was clearly prima facie obvious to one of ordinary skill in the art at the time the invention was made.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicole E. Kinsey, Ph.D. whose telephone number is (571) 272-9943. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce Campell can be reached on (571) 272-0974. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**BRUCE R. CAMPELL, PH.D.**  
**SUPERVISORY PATENT EXAMINER**  
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Nicole E Kinsey, Ph.D.  
Examiner  
Art Unit 1648